

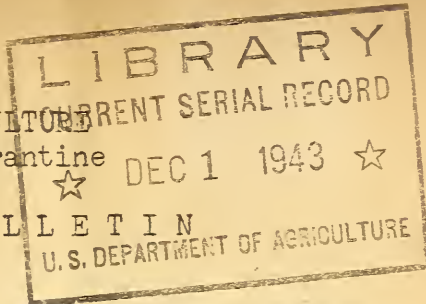
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UNITED STATES DEPARTMENT OF AGRICULTURE  
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INSECT PEST SURVEY BULLETIN

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REMEMBER PEARL HARBOR

THE MORE IMPORTANT RECORDS FOR APRIL

By the middle of the month the lesser migratory grasshoppers were about 65 percent hatched in Yuma County, Ariz. In the southern part of the Texas Panhandle hatching was well under way and populations averaged about 40 hoppers per square yard on field margins. The Valley grasshopper, Oedalconotus enigma (Scudd.), populations are as great in Kern County, Calif., as they were in 1940. The lesser migratory grasshopper is so numerous in Imperial County that control campaigns are contemplated.

During the last week in the month Mormon crickets were starting to hatch in South Dakota and large numbers were observed about the first of the month in Hot Springs County, Wyo., and Pershing County, Nev. In Washington and Oregon no migrations were under way until the middle of the month when migrations were reported from Oregon.

Heavy infestations of the coulee cricket were reported from Wasco County, Oreg., about the first of the month, the insects averaging 15 crickets per square yard.

Flights of the adult armyworms were reported about the middle of April in central Missouri.

Infestations of the pale western cutworm were reported from Texas and the southern Plains States.

A general infestation of second-year larvae of white grubs was reported from the southern half of Michigan and severe damage to onions was reported during the third week in the month in Williamson County, Tex.

Considerable damage to tobacco seed beds by green June beetle larvae was reported during the third week in the month from Garrard County, Ky.

Green bug was reported as causing appreciable damage to oats early in the month in South Carolina and light infestations were reported from Georgia. In Mississippi, oats and barley were almost completely destroyed in some fields. In Oklahoma most of the barley and oats and about half of the wheat in some areas were destroyed. The infestation was apparently spreading northward as colonies were found in wheat fields at Manhattan, Kans., surrounding winged females. In parts of Texas, oats, barley, and wheat were completely destroyed. The infestation by the first week in the month extended as far westward as Brown County and northward to Potter County.

By the last week in the month most of the chinch bugs in Indiana had left hibernation quarters and by the third week in the month moderately heavy flights were occurring in parts of Illinois. By the end of the month these insects had left hibernation quarters in Iowa, Missouri, Nebraska, and destruction of young corn plants was reported at this time in parts of Oklahoma. Heavy damage to corn and tomato by the corn earworm in the lower Rio Grande

Valley of Texas was reported during the third week in the month.

Slight to severe damage to peas by pea aphids was reported from Maryland southward to the Gulf region. These insects were also reported as doing some damage to alfalfa in Oklahoma, Utah, Kentucky, and Missouri.

Severe damage to sweet clover by the sweet clover weevil was reported over the northern two-thirds of Illinois.

Hatching of European red mite was reported during the third week in the month from New York and Pennsylvania.

First pupae of codling moth were recorded on April 25 at Poughkeepsie, N. Y., 9 days ahead of the average time for pupae. Pupation was well under way by the last week in the month in the South Atlantic and East Central States. By the second week of the month about 20 percent of the larvae had pupated in Washington State.

Rather heavy populations of rosy apple aphid were recorded from New York and Pennsylvania.

Peak emergence of plum curculio in the Cornelia area of Georgia occurred during the first week of April. In the Fort Valley section adults were leaving hibernation in large numbers during the first week in the month. This seems to indicate a full second-brood attack of the late peach varieties this year.

Reports of large numbers of citrus whitefly attacking satsuma oranges, privet, and gardenias were reported from Florida, Georgia, and Mississippi.

The first Mexican bean beetle was collected in the field at Norfolk on April 24. This is about 6 days later than last year.

Boll weevil activity was reported from Texas earlier in the month than has been reported in recent years. Throughout the remainder of the Cotton Belt activity was retarded by cool evenings.

A single moth of the cotton leafworm was collected on April 14 at Matamoros immediately across the river from Brownsville, Tex. This is the earliest date on record of the occurrence of this insect this far north.



GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Florida. F. S. Chamberlin (April 20): Newly emerged grasshoppers are abundant in tobacco fields in Gadsden County, necessitating control measures.

J. R. Watson (April 25): First lubberly locusts (Romalea microptera Beauv.) hatched at Gainesville on April 8, hatching being general by April 15.

Arizona. C. Wakeland (April 8): Egg-pod populations were examined during the latter half of March in Cochise and Graham Counties, southeastern Arizona, in areas infested by Melanoplus mexicanus (Sauss.). Survey confined mostly to range-land areas of the Sulphur Springs Valley and vicinity. Approximately 200,000 acres of range land found to be generally infested, egg pods averaging 1.3 per square foot; crop acreage in infested area represents less than 5 percent of the total area. First hatching occurred about March 15. By March 29 hatch throughout the area was about 25 percent complete. (April 16): Hatch of M. mexicanus in Yuma County is about 65 percent complete, this species representing about 98 percent of total population.

Texas. C. Wakeland (April 16): During the week ended April 11, in the southern part of the Texas Panhandle, hatching was in progress, M. mexicanus being the dominant species. Populations averaged 40 hoppers per square yard along infested field margins.

Idaho. J. R. Douglass (April 22): Hatching observed in southwestern and southern Idaho on April 6 and 20, respectively.

Utah. G. F. Knowlton (April 2): Nymph of Hippiscus corallipes Hald., more than 3/4 inch long, found south of Promontory.

W. E. Peay (April 20): First- and second-instar grasshoppers observed in Weber, Box Elder, Davis, Salt Lake, and Utah Counties between April 15 and 17.

California. S. Lockwood (April 21): The valley grasshopper (Oedaleonotus enigma (Scudd.) and M. mexicanus devastator Scudd. now range from first to third instars in Fresno, Kings, and Kern Counties. Populations in Kern County apparently as great as in 1940. Reports from Riverside indicate infestation by the valley cricket of a relatively small area in Riverside County. Reports from Imperial County indicate that M. mexicanus is appearing in numbers sufficient to warrant control.

MORMON CRICKET (Anabrus simplex Hald.)

South Dakota. H. C. Severin, et al. (April 25): Crickets are beginning to hatch.

Wyoming. B. T. Snipes (April 10): Large numbers hatched in range and farm land in the northeastern section of Hot Springs County on April 8.

Nevada. C. Wakeland (April 8): Reported as beginning to hatch in Pershing County on March 28, in Humboldt County on March 30, and in Lander County on April 2.

Washington. C. Wakeland (April 16): Confined at present to bunchgrass areas in Franklin County. Hatching began on the Yakima Indian Reservation about March 20.

Oregon. C. Wakeland (April 8): Growth retarded by cool weather in the Warm Springs area of Wasco County to such an extent that crickets are much smaller than normal. No migrations on either side of the Deschutes River,

resulting in considerable feeding damage to range grasses in limited areas. (April 16): Crickets range from very small up to sixth-instar nymphs and migrations are taking place.

COULEE CRICKET (Peranabrus scabricollis Thos.)

Oregon. C. Wakeland (April 1): Migrations occurred in the Axford area, Wasco County, during the warm part of the day. Part of this area heavily infested, averaging 15 crickets per square yard; largest crickets are fifth-instar nymphs.

CUTWORMS (Phalaenidae).

South Carolina. J. A. Berly (April 23): Troublesome in Clemson on beans and tomatoes in small gardens.

Tennessee. G. M. Bentley (April 23): Garden vegetables attacked; infestation general over the State.

Mississippi. C. Lyle, et al. (April 24): Reports of damage to gardens received from Clay, Calhoun, Grenada, and Monroe Counties, and from Meridian district. Damage to lettuce by Feltia gladiaria Morr. observed in Holmes County.

Kentucky. W. A. Price (April 25): Abundant in the middle of April in old strawberry patches in the vicinity of Louisville.

Iowa. H. E. Jaques (April): Scattered infestations reported.

Missouri. L. Haseman (April 24): Light flight around fruit blossoms of moths of armyworm (Cirphis unipuncta Haw.) in central Missouri on warm evenings since the middle of April. Light flight of undetermined moths observed in central Missouri during the third week of April.

Nebraska. H. D. Tate (April 15): Specimens of the western army cutworm (Chorizagrotis auxiliaris Grote) submitted from Dundy and Chase Counties on April 13 and 14 with reports of abundance.

Kansas. H. R. Bryson (April 15): Light damage locally to early planted tomato plants and peas at Manhattan.

Oklahoma, Texas, and New Mexico. E. E. Russell (March 30): Although pale western cutworms (Agrotis orthogonia Morr.) are present in the South Plains area, numbers are so reduced as to obviate important crop damage. A secondary cutworm, C. auxiliaris, has caused noticeable damage, particularly to late-planted fall wheat, and is generally prevalent in practically all crops throughout the area. Heaviest infestation of pale western cutworm was found in Potter County, Tex., on a farm in the western part of the county, and in a field east of Amarillo near the Potter-Carson County line, a maximum of 7 larvae per 20 unit feet of drill row being taken in each location. Heaviest infestation of the army cutworm was found near Perryton, Tex., where a maximum of 28 larvae per 20 unit feet of drill row was found. (Det. by C. Heinrich.)

Montana. H. B. Mills (April 20): Moderate damage to winter wheat by C. auxiliaris reported below the Yellowstone River, in southeastern Montana.



WHITE GRUBS (Phyllophaga spp.)

- Michigan. R. Hutson (April 24): One-year grubs numerous in vicinity of Howell, Fowlerville, and Mason. General infestation of second-year grubs over most of the southern part of the State.
- South Carolina. F. F. Bondy (April 18): Adults present in large numbers on greens of golf course at Florence on the morning of April 17.
- Mississippi. E. W. Dunnam (April 20): Several May beetles observed at lights in Leland.
- Iowa. H. E. Jaques (April): Infestations scattered over the State.
- Texas. H. J. Reinhard (April 20): Severe injury to onions by grubs of P. farcta Lec. in Williamson County during March and April.

GREEN JUNE BEETLE (Cotinis nitida L.)

- Kentucky. W. A. Price (April 25): Larvae caused considerable injury to tobacco beds in Garrard County during the third week in April.
- Mississippi. N. L. Douglass (April 24): Grubs, possibly those of this species, are very numerous in flower beds in Grenada, Montgomery, and Yalobusha Counties.

A SCARABAEID (Amphimallon majalis Razoum.)

- Correction. A. G. Boving (April): The report on Rhizotrogus solstitialis L., appearing in the last number of the Bulletin (v. 22, p. 21, April 1, 1942), was based on a larval identification. An adult female has now been examined and tentatively identified as A. majalis. The material was collected at Newark, N. Y., not at Geneva, N. Y.

BUGS (Hemiptera)

- Texas. P. T. Rihard (April 20): Species observed on flax in Hidalgo County on April 19 comprised Chlorochroa ligata Say, Nysius californica Stal, Lep-toglossus phyllopus (L.), and Hyalymenus tarsatus (F.).

C E R E A L   A N D   F O R A G E - C R O P   I N S E C T S

WHEAT AND OTHER SMALL GRAINS

GREEN BUG (Toxoptera graminum Rond.)

- South Carolina. F. F. Bondy (March 28): Numerous in some fields of oats near Florence, where it is causing appreciable damage. (April 4): Parasitization has begun to increase, which, combined with warmer weather, will probably give effective control soon.
- Georgia. T. L. Bissell (March 31): No killing of plants in one field of oats, and population very small, although small colonies of apterous forms were located. No winged forms observed.
- Mississippi. C. Lyle, et al. (April 24): Severe injury to oats and barley observed in Clay and Washington Counties, some fields being almost completely destroyed.
- Kansas. R. H. Painter (April 14): Colonies, presumably migrants from the south, found surrounding individual winged females in some experimental wheat and oat plots at Manhattan on April 13. Considerably less than 1

percent of plants infested. A few adult ladybirds observed. Report received of considerable abundance on oats in Harper County.

H. R. Bryson (April 25): Notes show presence on winter barley in Cherokee County on November 11, 1941, in Cowley and Sumner Counties on April 11, and in Kingman County on April 14. Reported as observed in Sedgwick, Sumner, Harper, Barber, Comanche, Clark, and Ford Counties. Reported also that infestation in Harper, Barber, and Comanche Counties had apparently disappeared, although damage was still evident.

Oklahoma. F. A. Fenton (April 23): Severe infestation in southern third of State; most of the barley and oats destroyed and half the wheat in some areas, where fields were generally infested. Infestation spread northward, involving small grains as far north as Stillwater, but injury was not so severe in this area because wheat was more advanced; however, most of the barley was destroyed or severely damaged. At about this time heavy rains over a considerable part of the northern Wheat Belt resulted in an apparent check in infestation. Recent survey showed wheat in excellent condition, the only fields infested being barley.

Texas. P. B. Dunkle (April 8): Fall-planted oats on lighter soils destroyed as early as January, and by March 1 practically all fall and spring oats had been destroyed from Gainesville to Corsicana, and from McKinney to Henrietta. Barley and wheat were then attacked, and by April 1 all but a very few isolated borderland fields were destroyed. Infestation now very heavy as far west as Brownwood, Brown County, and as far north as Amarillo, Potter County.

F. L. Thomas (April 20): Serious injury in north-central Texas from San Angelo, Tom Green County, and Waco, McLennan County, northward to the Red River. Injury especially heavy in Dallas and adjoining counties.

#### CHINCH BUG (Blissus leucopterus Say)

Indiana. C. Benton (April 28): Observations on flight screens showed that a few bugs had left winter quarters at LaFayette on April 5 and 6. Second wave of gradual migration from April 15 to 28, peak occurring from April 23 to 25. Indications are that most of the bugs left hibernation earlier than for several years.

Illinois. W. P. Flint (April 23): Moderately heavy flights are occurring on warm days.

Iowa. H. E. Jaques (April): Moderately heavy infestation in west-central and southwestern Iowa; less heavy in southeastern part of State.

Missouri. P. C. Stone (April 1): Recent surveys in central Missouri show winter mortality in some individual clumps to be as high as 30 to 40 percent, though the average will be much lower. Activity observed in clump grasses during the warm period ended March 25, but no flights observed.

(April 24): Considerable activity observed in hibernation quarters in central Missouri during the second week in April. Bugs were flying in two southwestern counties April 17 and in northwestern counties April 23.

Nebraska. H. D. Tate (April 15): Survey during the last week of March and the first week of April showed an average winter mortality in the east-central and southeastern counties of approximately 20 percent, somewhat less than normal.

Oklahoma. R. G. Dahms (April 24): All had apparently left winter quarters by April 8, as none were found in clumps of bunchgrass; many bugs observed flying north on April 16 and 17. Reports received of destruction of young corn plants in Comanche County. Cool, wet weather has retarded oviposition



and egg development and no nymphs have been observed, although some eggs were deposited in small grains in March.

#### APHIDS (Aphidae)

Georgia. T. L. Bissell (March 31): Aphids, taken to be Rhopalosiphum pruni-foliae (Fitch), were rather thick on a few plants in one place in a field of oats, but not observed elsewhere.

Louisiana. County Agent (March 20): Large field of oats and barley so severely attacked at Shreveport, Caddo County, that crop was almost a total loss before parasites and predators brought the aphids under control.

#### HESSIAN FLY (Phytophaga destructor Say)

Iowa. H. E. Jaques (April): Infestations reported from southwestern Iowa, being moderately abundant only in Audubon and Montgomery Counties.

Missouri. L. Haseman (April 1): Examination of experimental wheat plantings in central Missouri indicates one of the lightest infestations in many years. More abundant, especially in volunteer wheat, in western Missouri and in some of the southeastern counties.

Kansas. H. R. Bryson (April 25): Full-grown larvae of first brood reported as found in field at Manhattan today, an early date for appearance.

#### THRIPS (Thrips sp.)

Arizona. T. P. Cassidy, et al. (March 28): Found in large numbers on barley planted in alternate rows in a lettuce field in Pima County; also found on lettuce but no evidence of damage.

#### CORN

##### CORN EARWORM (Heliothis armigera Hbn.)

Texas. C. O. Gingrass (April 21): Heavy damage to the corn crop near Edinburg, Hidalgo County, noticed throughout the district.

##### CORN FLEA BEETLE (Chaetocnema pulicaria Melsh.)

Oklahoma. C. F. Stiles (April 27): Observed in damaging numbers in Garvin County.

#### ALFALFA AND CLOVER

##### PEA APHID (Macrosiphum pisi Kltb.)

Maryland. L. P. Ditman (April): Overwintered forms were multiplying in alfalfa fields at Ridgely on April 1. Winged forms present before April 15, when winged forms were also found on peas at College Park.

Georgia. T. L. Bissell (April 23): Scarce on Austrian winter peas at Experiment, central Georgia today, but this crop was heavily infested at Tifton by April 16.

Mississippi. M. L. Grimes (April 24): Some damage to peas observed in the Meridian district.

- Kentucky. W. A. Price (April 25): Very bad in alfalfa fields in Spencer and Fayette Counties.
- Missouri. G. D. Jones (April 24): Complaints of serious damage to alfalfa received from south-central Missouri during the third week in April.
- Kansas. H. R. Bryson (April 25): Has caused little damage to alfalfa, owing to weather conditions favorable to the growth of plants and also to the presence of predators. Some injury to alfalfa in vicinity of Garden City. Abundant on peas and sweet peas, but no damage reported.
- Oklahoma. R. G. Dahms (April 24): Considerable damage to alfalfa in southwestern Oklahoma; also reported in alfalfa fields in central and eastern Oklahoma.
- Utah. G. F. Knowlton (April 20): First- and second-instar nymphs appeared on alfalfa at Hooper, Weber County, by April 2. Aphids have now hatched at Logan and Roy, northern Utah.
- C. J. Sorenson (April 20): Small numbers observed on alfalfa at Perry, Box Elder County.
- California. S. Lockwood (April 21): Populations in peafields of the Sacramento Delta are below normal for this time of year.

ALFALFA WEEVIL (Hypera postica Gyll.)

- Utah. G. F. Knowlton, et al. (April 2): Adults active in alfalfa stubble at Logan.
- C. J. Sorenson (April 21): Overwintered adults active in small to moderate numbers at Perry, Box Elder County.

CLOVER LEAF WEEVIL (Hypera punctata F.)

- Utah. G. F. Knowlton, et al. (April 2): Adults observed in alfalfa stubble at Logan.

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris F.)

- Illinois. W. P. Flint (April 23): Unusually large flights noted during the first warm days of April. Thousands seen floating on surface of ponds.

SWEETCLOVER WEEVIL (Sitona cylindricollis Fahraeus)

- Illinois. W. P. Flint (April 23): Adults are causing severe damage to sweet-clover in the northern two-thirds of the State.

A WEEVIL (Sitona lineata L.)

- Washington. E. P. Breakey (April 23): Severe infestation of peas and vetch was observed on April 10 on Fidalgo Island, Skagit County. Mating and oviposition were going on and the beetles were very active.
- (The report from Moscow, Idaho, as published in the last number of the Bulletin (v. 22, p. 19, April 1, 1942), is questionable.)

GRAPE COLASPIS (Colaspis brunnea F.)

- Illinois. W. P. Flint (April 23): Grubs apparently overwintered in good condition; extremely numerous in clover and alfalfa fields in central Illinois.



PLANT BUGS (Lygus spp.)

Utah. C. J. Sorenson (April 20): Overwintered adults of L. hesperus Knight and L. elisus Van D. observed on alfalfa at Perry and Tremonton; no nymphs observed.

MEADOW PLANT BUG (Miris dolabratus L.)

Kentucky. W. A. Price (April 25): Eggs started to hatch at Lexington on April 15. Grass sweepings indicate a rather large population in central Kentucky.

Correction.--The report on Limonius californicus Mann. by C. E. Woodworth in the last number of the Bulletin (v. 22, No. 2, p. 21, April 1, 1942) should read as follows: Washington. C. E. Woodworth (March 9): One male recovered in a store in Walla Walla in a head of broccoli from Los Angeles. The insect is in full emergence at Los Angeles, but not yet out of the ground locally.

F R U I T I N S E C T S

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

New York. N. Y. State Coll. Agr. News Letter (April 13): This scale developed during the dry season of 1941 in Niagara County. Some blocks of peaches treated for several years for disease have developed sizable infestations.

Pennsylvania. H. M. Steiner (April 24): Increased in 1941 and spotty infestations occur throughout the Adams County area on apple.

Georgia. O. I. Snapp (April 2): A heavy infestation was observed today in a Fort Valley peach orchard which did not receive treatment last winter.

Ohio. E. W. Mendenhall (April 1): A commercial plum orchard north of Worthington, in Delaware County, is badly infested with the scale, which is killing the limbs.

Mississippi. C. Lyle, et al. (April 24): Light infestations reported from the Durant district and from Hinds County; heavy infestations reported on unsprayed trees in the Meridian district.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

New York. N. Y. State Coll. Agr. News Letter (April 27): Eggs beginning to hatch in apple orchards in Orange and Rockland Counties.

Pennsylvania. H. M. Steiner (April 24): Hatching of overwintered eggs on apple, peach, and sour cherry began April 15 in Adams County, but was checked by cool weather for several days; approximately 15 percent of the total eggs hatched by April 24. Eggs are less numerous than at any time since 1938.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. D. W. Hamilton (April 25): First pupae were found at Poughkeepsie on April 25, 4 days later than in 1941, but 9 days ahead of the average date.



- Virginia. A. M. Woodside (April 27): Very heavy carry-over in Augusta County. About 20 percent of the larvae on the trees had pupated by April 23.
- North Carolina. C. F. Smith (April 3): Approximately two-thirds of the overwintering larvae in West End have pupated.
- Georgia. W. H. Clarke (April 17): First moths were caught in bait traps in Cornelia today, 11 days earlier than last year, and first moths emerged from pupation stakes in outdoor insectary.
- Indiana. L. F. Steiner (April 8): Pupation began this week and now approximates 14 percent in Vincennes. (April 29): The first emergence under natural conditions was observed in one orchard at Vincennes on April 27, and moths were found in traps in a second orchard on the morning of the 28th. Emergence began in our insectary and in two orchard emergence cages on April 28.
- Missouri. L. Haseman (April 1): The heavy crop of overwintering worms has not been damaged to any extent by the winter temperatures, except in some southern counties where temperature dropped much lower than normal.
- Washington. M. A. Yothers and F. W. Carlson (April 10): About 20 percent of the larvae have pupated in the orchards at Yakima. First pupae were found about April 1. Very little winter mortality.

EASTERN TENT CATERPILLAR (Malacosoma americana F.)

- New York. N. Y. State Coll. Agr. News Letter (April 20): The caterpillars started hatching the middle of the month in the lower Hudson River Valley. Tents are more numerous than usual.
- J. V. Schaffner, Jr. (April 22): Caterpillars particularly abundant on wild cherry through Nassau County. Tents were very noticeable on April 21.
- Pennsylvania. G. Slesman (April 22): Threatens to be as destructive in Philadelphia area as it was last year, which was an unusually bad season, when practically all wild cherry and apple trees were completely defoliated. Observation and data collected show that parasitization was very low in 1941.
- Delaware. L. A. Stearns (April 6): First nests, about 1 inch wide, were observed on wild cherry in Middletown.
- Virginia. A. M. Woodside (April 27): Fairly common on wild cherry in Augusta and Rockbridge Counties. Eggs hatched about April 10.
- L. A. Hetrick (April 7): Small webs and first-instar larvae are present on wild cherry in the eastern part of the State.
- Georgia. T. Thompson (April 10): Light damage to roadside trees in Brooks County noted.
- W. H. Clarke (April 14): The first caterpillars of the year were noted at Cornelia and Vic, Habersham County, on April 8. Webs were about the size of a baseball, and were a common occurrence, some trees along edges of woods having from two to five webs each. Only a few webs were noted on apple trees.
- Michigan. E. I. McDaniel (April 21): A hatching egg mass was received on April 21 at Perrinton. Is common in unsprayed orchards and on young trees throughout the southern part of the State.
- Tennessee. G. M. Bentley (April 23): Made an early appearance and is generally scattered throughout the State, attacking primarily wild cherry and apple trees.
- Mississippi. C. Lyle (April 24): Heavy infestation observed in Jones County and specimens were observed on peach trees in Durant district.

FRUIT TREE LEAF ROLLER (Archips argyrospila Wlk.)

New York. N. Y. State Coll. Agr. News Letter (April): The first larvae were found on April 25 in Rockland County, in the eastern part of the State. In Niagara County the first egg masses were numerous in a number of apple orchards on April 13, and some have been deposited on nearby cherries, prunes, and pears.

Wisconsin. J. A. Callenbach (April 27): Eggs began hatching in Crawford County on April 24. Trees in early closed-cluster stage.

Missouri. L. Haseman (April 24): In the northeastern part of the State the first eggs began hatching on April 16 and in the central part on April 17.

PISTOL CASEBEARER (Coleophora malivorella Riley)

Pennsylvania. H. M. Steiner (April 24): Infestation extends over more than 3,000 acres of an Adams County apple orchard, with prospects of heavy defoliation in several hundred acres. Parasitization of overwintered larvae is much higher than in previous years of the outbreak, ranging from 18 to 40 percent in the observed orchard with species that should greatly increase their numbers during the blossom period. First casebearer feeding was observed April 3.

APHIDS (Aphidae)

New York. N. Y. State Coll. Agr. News Letter (April 20): At Poughkeepsie, on April 16, eggs of the three species of apple aphids appeared to be slightly more numerous than usual. Aphid counts at Ithaca on apple trees in the college orchard showed the proportion of rosy aphid (Anuraphis roseus Baker) to green (Aphis pomi Deg.) and grain aphid (Rhopalosiphum prunifoliae Fitch) is high. (April 27): In Niagara County rosy aphids are fairly abundant on apple at present, in high proportion to the grain and green aphids. Syrphid fly eggs observed, and a number of ladybugs. In Monroe County, although other aphids died during the cold weather, rosy aphids are very abundant. During the week beginning April 12 the rosy aphid was steadily increasing.

Michigan. R. Hutson (April 24): Green aphids are numerous in all the west coast orchard area.

Pennsylvania. H. M. Steiner (April 24): A. roseus makes up most of the aphid population in many apple orchards in Adams County, and the scarcity of predators indicates that severe damage will occur in several unsprayed orchards.

Virginia. A. M. Woodside (April 13): Eggs of the rosy apple aphid began hatching about March 31 in Augusta County. Aphids are less common than usual on apple, the rosy aphid being the most common.

W. S. Hough (April 25): First generation of the rosy apple aphid was present in a number of orchards and indications are that damage will be severe in May where the proper control measures were not applied in the dormant and delayed sprays. Other apple aphids are almost entirely absent.

Indiana. L. F. Steiner (April 16): The apple grain aphid (R. prunifoliae) is abundant in some orchards in the Vincennes area. (April 29): No rosy apple aphids observed. The grain aphid is now migrating from apple.

Wisconsin. J. A. Callenbach (April 20): Eggs of the apple grain aphid were hatching on April 14 in Crawford County. Infestation is the lightest observed in recent years.



A LEAFHOPPER (Erythroneura laws Oniana Baker)

North Carolina. Z. P. Metcalf (April 8): Overwintered in enormous numbers in Sand Hills area, average number of adults per square foot of hibernating area being 138.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Georgia. W. H. Clarke (April 17): The first moths of the season were caught in bait traps at Cornelia on April 14 and 17. Sixteen moths were caught in 10 traps on April 17 as compared with 5 from 10 traps on the same date last year.

T. L. Bissell (April 23): Observed at Griffin on April 22, when larvae were just beginning to mine peach twigs.

Indiana. L. F. Steiner (April 23): The first adult appeared in an emergence cage at Vincennes on April 20.

Mississippi. C. Lyle (April 24): A very small larva, probably the oriental fruit moth, was taken from a plum twig in Holmes County.

PEACHTREE BORER (Sanninoidea exitiosa Say)

Virginia. A. M. Woodside (April 13): A small planting of plum trees adjoining peaches were heavily attacked in Augusta County; some of the trees were killed by girdling.

Mississippi. C. Lyle (April 24): Was moderately abundant in untreated trees in the Jackson district.

LESSER PEACH BORER (Sanninoidea pictipes G. & R.)

North Carolina. C. F. Smith (April 17): Adults emerging at Norman.

Georgia. O. I. Snapp (April 6): Moths were observed on wing in a peach orchard at Fort Valley today.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Utah. C. J. Sorenson (April 20): The season is later than average in Box Elder County. Subzero temperatures in December and January killed from 50 to 100 percent of the peach buds in orchards of this district. Larvae have just begun feeding.

G. F. Knowlton (April 27): Abundant and damaging peach trees at Toquerville.

California. S. F. Bailey (April 27): The peach twig borer made its appearance about on time. The first feeding larvae appeared under the bark of almond on January 26; first wilted shoots were found on March 16. The pupae, however, were a little bit later in showing up, not being found until April 4. The activity on peaches was about a week later. Indications are that infestation will be moderate on peaches and approaching greatest severity on almonds.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Pennsylvania. H. M. Steiner (April 24): Adults were found on border trees



in peach orchards in Adams County on April 17 at the pink stage and were well distributed several rows into the orchard on April 23.

North Carolina. C. F. Smith (April 8): Many curculios were present on peaches near the woods. They have spread to the fourth row from the edge at Hamlet.

C. F. Smith (April 15): At Norman an unusually large number of plum curculios overwintered and are entering the peach orchards. Some are ovipositing.

Georgia. W. H. Clarke (April 14): The first curculio emerged from hibernation on March 26 at Cornelia when caught in experimental jarring. No further emergence was noted until April 6, when 149 beetles were caught from 15 trees. The same trees jarred again on April 8 gave 287 beetles, and this proved to be the peak emergence. Dispersal into orchards was indicated on April 8.

O. I. Snapp (April 20): Adults were leaving hibernation at Fort Valley in large numbers on April 6, when the trees were ready for the petal-fall spray. An average of 8 adults per tree were taken from peach trees next to woods on that date. Mean temperatures for April 3, 4, 5, and 6 were 60.5°, 65.5°, 67.5°, and 68° F., respectively. Matured eggs were found in the body of a female on March 25, when peach trees were in full bloom. This is earlier than usual and indicates early oviposition and a full second-brood attack of the late varieties. Adults reached the center of peach orchards on April 3, which was just before the time for the first spray. The first eggs were found in peaches on April 8. The numbers of adults appearing from hibernation were greater than that of an average year. The first larvae of the season were observed in small peaches on the morning of April 17. These larvae were about 2 days old.

Texas. R. K. Fletcher (April 20): Noted in plums in Brazos County, March 14.

#### GREEN PEACH APHID (Myzus persicae Sulz.)

Washington. E. J. Newcomer (March 31): Much more numerous on peach buds at Yakima than for some years.

#### TERRAPIN SCALE (Lecanium nigrofasciatum Perg.)

Pennsylvania. H. M. Steiner (April 24): Is more numerous than last year on peach in Adams County.

#### WHITE PEACH SCALE (Pseudaulacaspis pentagona Targ.)

Alabama. J. M. Robinson (April 1): Reported as abundant on 3-year-old peach trees at Abbeville, Henry County, on March 25.

#### PEAR

#### PEAR PSYLLA (Psylla pyricola Foerst.)

New York. N. Y. State Coll. Agr. News Letter (April): Eggs were observed the last week of March in the lower Hudson River Valley. Young nymphs were observed by April 23. Eggs were noted in western New York on April 5.

#### PEAR MIDGE (Contarinia pyrivora Riley)

New York. N. Y. State Coll. Agr. News Letter (April 27): In western Suffolk

County pear midges were abundant on pear trees but no eggs were observed. Flies were observed on April 21 in Dutchess County. In Ulster County they were abundant on April 23.

PEAR THRIPS (Taeniothrips inconsequens Uzel)

California. S. F. Bailey (April 27): Small local infestations are reported from Gilroy, Santa Clara County, Sonoma Valley near Vineburg, Sonoma County, Fairfield, Solano County, and Placerville, Eldorado County. The reduction in the infestation is in keeping with the general cycle of the insect, which always becomes less abundant following wet winters.

CHERRY

BLACK CHERRY APHID (Myzus cerasi F.)

New York. N. Y. State Coll. Agr. News Letter (April): First hatching occurred the first week in April in the lower Hudson River Valley, and aphids were easily found in Monroe County by April 12.

Montana. H. B. Mills (April 20): In Lake County aphids were observed migrating to buds of sweet cherries on April 13.

Utah. G. F. Knowlton (April 27): Abundant and damaging cherries in a number of orchards in Washington County.

THRIPS (Thysanoptera)

Utah. C. J. Sorenson (April 15): Thrips were abundant in sweet cherry buds which were about ready to blossom. In Perry, Box Elder County, as many as 15 were found in one bud.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Mississippi. E. W. Dunnam (April 20): A few aphids were observed inflicting slight damage to plum trees in Leland.

C. Lyle (April 24): Noted on plum trees in Tate and Oktibbeha Counties; also observed in Monroe County.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

California. D. F. Barnes (April 20): In Fresno County emergence began on April 2 in the laboratory. Field emergence began at about the same time.

RAISIN MOTH (Ephestia figulilella Greg.)

California. D. F. Barnes (April 13): Emergence in the field was noted in Fresno County about April 13.

PECAN

PECAN NUT CASEBEARER (Acrobasis caryae Grote)

Texas. C. B. Nickels and W. C. Pierce (April 25): More abundant than average



The percentage of pecan shoots infested by overwintering larvae in orchards was as follows: Brownwood, orchard 1, 21.8 percent; orchard 2, 15.6 percent and 26.9 percent. Comanche, 22.1 percent; Crystal City, orchard 1, 32.1 percent, and orchard 2, 14.2 percent. At Rising Star there was 14.8 percent infestation.

HICKORY SHUCKWORM (Laspeyresia caryana Fitch)

Georgia. O. I. Snapp (April 20): Was abundant last year at Fort Valley and caused considerable damage to the pecan crop. A heavier than usual infestation is expected this year.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Maryland. C. Graham (March 18): Noted on pecan at Colora, Cecil County, in the northeastern corner of the State.

CITRUS

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

South Carolina. F. F. Bondy (April 18): Whiteflies are unusually abundant on camellia and privet near one residence in Florence, showing a decided preference for the camellia.

Georgia. T. Thompson (April 11): Medium damage to satsuma noted in Brooks County.

T. L. Bissell (April 23): Observed at Experiment on April 22. Common privet hedge was thickly infested.

Florida. J. R. Watson (April 25): Is in flight at Gainesville and laying eggs. Flights are later than usual.

H. T. Fernald (April 8): Adults appearing in numbers at Winter Park on citrus and gardenia.

Mississippi. C. Lyle (April 24): Reports of injury to privet hedges were received from Hinds and the southeastern counties. Injurious to gardenia in Lauderdale County and the Meridian district.

T R U C K - C R O P I N S E C T S

VEGETABLE WEEVIL (Listroderes obliquus Klug)

Florida. F. S. Chamberlin (April 9): Very abundant in Gadsden County, causing injury to turnips, potatoes, and other truck. Nearly all tobacco plant beds infested.

J. R. Watson (April 25): Specimen sent in from Pensacola, western Florida, Alabama. J. M. Robinson (April 21): Reported as attacking turnips at Enterprise on April 1. Larvae abundant at Auburn.

Mississippi. C. Lyle, et al. (April 24): Specimens received from Hinds County on March 30 and from Stone County on April 16. Damage to turnips reported from Holmes County.

Texas. J. N. Roney (April 20): Mustard, carrots, tomatoes, and cabbage attacked in Brazos County during March and April.

California. J. Wilcox (April 18): Adults cut off about 15 percent of newly set out tomato plants about 1 inch above ground at San Gabriel, southern California. Control measures necessitated. Adults also numerous in the Whittier area. After cover crop in walnut and citrus orchards was plowed under the weevils moved into home gardens.



A WEEVIL (Ceutorhynchus tau Lec.)

Texas. J. N. Roney (April 20): Damage to garlic in Lavaca County during March and April. Onions injured in Bell, Fayette, and Williamson Counties.

FLEA BEETLES (Halticinae)

Georgia. T. L. Bissell (April 23): Small turnip plants at Experiment, central Georgia, injured on April 14. Cold weather has retarded the crop.

Kentucky. W. A. Price (April 25): Striped cabbage flea beetle (Phyllotreta vittata F.) abundant in the bluegrass area.

Nebraska. H. D. Tate (April 15): Specimens attacking cabbage in Dawson County on April 10 were identified as P. pusilla Horn.

Idaho. J. R. Douglass (April 22): Adults of P. albionica Lec. attacking several species of mustard in southern Idaho.

Oregon. K. W. Gray (April 1): Phyllotreta sp. was found on turnips at Corvallis, Willamette Valley.

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Indiana. J. J. Davis (April 23): First beetles found at La Fayette on April 22; observed in abundance, feeding on blossoms of serviceberry.

Texas. J. N. Roney (April 20): Spinach and turnips attacked in Brazos County.

BLISTER BEETLES (Meloidae)

Florida. J. R. Watson (April 25): Common in Alachua County on tomatoes, eggplant, and potatoes, and also on Dahoon holly, from which they strip the leaves.

GARDEN CENTIPEDE (Scutigera immaculata Newp.)

Utah. G. F. Knowlton (April 2): Home gardens infested at Logan. (April 10): Lilies damaged at Providence, Cache County.

GARDEN SLUG (Agriolimax agrestis L.)

Correction.--D. C. Mota. In the last Bulletin (v. 22, No. 2, p. 27, April 1) the note under garden slug should read, "Eggs are just beginning to hatch in considerable numbers" instead of "Eggs are being laid in considerable numbers."

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Florida. J. R. Watson (April 25): Eggplant injured in Gainesville.

Mississippi. C. Lyle, et al. (April 24): Adults have appeared in the Grenada district, and in Hinds, Holmes, and Monroe Counties. None observed in Gulfport area.

E. W. Dunnam (April 18): Slightly damaged potato plants in a garden at Leland.

Missouri. L. Haseman (April 25): Beetles are feeding on early potatoes in central Missouri.

Kansas. H. R. Bryson (April 20): Adults abundant on volunteer potatoes and on planted potatoes that are coming through the ground.

CORN WIREWORM (Melanotus communis Gyll.)

Florida. A. N. Tissot (April 25): Considerable damage to potatoes in Dade County.

TOMATO FRUITWORM (Heliothis armigera Hbn.)

Texas. C. O. Gingrass (April 21): Approximately 50 percent of the early tomatoes in Hidalgo County are damaged.

POTATO APHID (Macrosiphum solanifolii Ashm.)

Ohio. G. V. Johnson (April 14): Alate and apterous adults and nymphs are attacking potatoes in storage at Columbus. (Det. by P. W. Mason.)

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Virginia. L. W. Brannon (April 24): First beetle collected on beans in the field today at Norfolk. This is 6 days later than first emergence in 1941, but about average for the last several years. Emergence apparently had just begun, as only one beetle was found on one row of beans 200 feet long.

Florida. F. S. Chamberlin (April 23): Adults are becoming abundant in bean-fields in Gadsden County.

Alabama. J. M. Robinson (April 21): Abundant at Auburn.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Virginia. L. W. Brannon (April 18): First adult collected in field at Norfolk today, feeding on young beans. Same date as first emergence in 1941 and about average emergence date for this locality.

Georgia. T. L. Bissell (April 23): Beetles observed on April 22 attacking first beans.

Alabama. J. M. Robinson (April 21): Beetles have been abundant at Auburn.

Mississippi. C. Lyle, et al. (April 24): Reported on beans in Hinds, Holmes, and Oktibbeha Counties.

PEAS

ONION THRIPS (Thrips tabaci Lind.)

Florida. J. R. Watson (April 25): A 7-acre field of peas at Sanford has been ruined.

CABBAGE

APHIDS (Aphiidae)

Georgia. R. W. Harned (April 12): Cabbage aphids apparently less numerous and troublesome than last season on seedling plantings in southern Georgia.



Mississippi. C. Lyle, et al. (April 24): Reports of injury by plant lice to cabbage received from Grenada and Jackson districts and from Monroe County. Specimens of Brevicoryne brassicae (L.) were taken from cabbage in Oktibbeha County early in April.

E. W. Dunnam, et al. (April 4): Cabbage infested with aphids at Stoneville, Washington County.

#### HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. L. A. Hetrick (April 14): Adults abundant at West Point, feeding on stems and foliage of clumps of yellow alyssum. No eggs could be found, and no nymphs were seen. Evidently the adults had hibernated in the clumps of the plant.

Alabama. J. M. Robinson (April 21): Abundant at Auburn.

Kentucky. W. A. Price (April 25): Adults received on April 17 from Leitchfield.

Mississippi. C. Lyle, et al. (April 24): Specimens received from Oktibbeha County, and reports of damage from the Grenada, Jackson, and Meridian districts, and from Holmes County.

Texas. J. N. Roney (April 20): Turnips and cabbage damaged in Brazos County.

#### CABBAGE MAGGOT (Hylemya brassicae Bouche)

New York. N. Y. State Coll. Agr. News Letter (April 20): Flies observed on Long Island on April 15. (April 27): Flies numerous on Long Island and on Staten Island by April 25; no oviposition observed.

Oregon. D. C. Mote, et al. (April 21): Eggs around stems of newly-transplanted cabbage and cauliflower in Corvallis, Willamette Valley.

#### DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Texas. C. O. Gingrass (April 3): Damage severe in some fields in Hidalgo County.

#### TURNIP

##### APHIDS (Aphidae)

Georgia. T. L. Bissell (April 23): The turnip aphid (Rhopalosiphum pseudo-brassicae Davis) was injuring small turnips at Experiment on April 14, when cold weather had held back this crop.

Mississippi. C. Lyle, et al. (April 24): Complaints of injury to turnips by plant lice received from the Grenada, Gulfport, and Meridian districts, and from Holmes County.

Texas. J. N. Roney (April 20): Severe injury by the turnip aphid to turnips and cabbage in Brazos County in April.

#### ASPARAGUS

##### ASPARAGUS BEETLE (Crioceris asparagi L.)

Michigan. E. I. McDaniel (April 29): New shoots attacked as they appear above ground. First cutting of asparagus today. Beetles very abundant in some fields.



SWEETPOTATO

SWEETPOTATO LEAF BEETLE (Typophorus viridicyaneus Crotch)

South Carolina. W. M. Upholt (April 7): About 5 percent of the stored sweet-potatoes at the Edisto Station have been injured by what is believed to be this species.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy (April 13): Activity in cages at Florence was considerable during the first part of last week, following several unusually warm nights, but cooler weather greatly reduced this activity later in the week. (April 18): Activity in cages still relatively light, but some field movement indicated by collection of a weevil outdoors on April 15.

Georgia. P. M. Gilmer (April 19): Little activity in cages at Tifton, despite warm days; cages located in medium-dense low woods. Cold evenings have tended to offset warm days, and shade has prevented surface trash from becoming very warm.

Florida. S. W. Walkup (April 11): Weevils active in hibernation cages at Gainesville. One check showed 1 live weevil and 9 dead in 5 cages with forest leaves as bedding, and 5 live and 16 dead were counted in 5 cages with coarse grass as bedding. A second check showed 4 live weevils in cages with leaves, and 9 live weevils in cages containing coarse grass. No weevils removed from cages.

Mississippi. E. W. Dunnam (April 25): None observed during the week at Stoneville, Washington County.

Louisiana. R. C. Gaines, et al. (April 18): Five weevils removed during the week from field flight screens in Madison Parish, as compared with two in 1941, and none in 1940.

Texas. F. L. Thomas (May 1): More weevils now active in the fields than in other years at this date.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. L. W. Noble (April 25): Emergence from hibernation cages at Presidio began on April 17, only 1 specimen being recorded for last week. During this week 234 moths were recovered from traps, representing 0.8 percent of original larvae placed in the cages.

COTTON LEAFWORM (Alabama argillacea Hbn.)

Mexico. F. L. Thomas (May 1): A single specimen was found on April 14 near Matamoros, just across the Rio Grande from Brownsville, Tex. This is the earliest date on record of the occurrence in cotton of this insect in or adjacent to the United States.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

Texas. R. K. Fletcher (April 20): In Burleson County on April 19, 46 adults were taken on primrose in 50 sweeps of a standard net. Nymphs were present, and dead croton observed.

K. P. Ewing, et al. (April 25): First field nymph of the season found on April 17 on croton in McLennan County. On April 23, 1 adult and 4 second-instar nymphs were found on croton near Waco. Emergence of nymphs in cages increased, apparently owing to recent rains; total emergence prior to April 17 was 89 nymphs, but from April 18 to 24, inclusive, emergence totaled 6,180.

## FOREST AND SHADE - TREE INSECTS

### CANKERWORMS (Geometridae)

New York. N. Y. State Coll. Agr. News Letter (April 27): On April 23 a few spring cankerworms (Paleacrita vernata (Peck)) were present in an apple orchard. Larvae were found in Ulster County on apple on April 24. In western New York eggs of cankerworms were easily found in Niagara County.

E. P. Felt (April 23): Eggs of the fall cankerworm (Alsophila pometaria (Harr.)) were locally abundant in Westchester County.

Illinois. W. P. Flint (April 23): Cankerworm eggs began hatching in central Illinois about April 14. They are now hatching in large numbers throughout the central and north-central parts of the State.

Minnesota. A. C. Hodson and T. A. Aamodt (April): The spring cankerworm made its first appearance in St. Paul about March 18. During the following 2 weeks heavy flights were observed, particularly near the Mississippi River.

Missouri. L. Haseman (April 1): There was a light flight of cankerworm moths on 2 or 3 warm nights throughout central Missouri during the third week in March, but the indications are that there will be fewer this year than in 1941. (April 30): Spring cankerworms are half grown.

Nebraska. H. D. Tate (April 15): Several spring cankerworm females were collected on elm trees in Franklin County on March 20.

Oklahoma. F. A. Fenton (April 14): Spring cankerworms are hatching and starting to feed on the tender growth of fruit trees.

### FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Louisiana. T. E. Snyder (April 27): During April the caterpillars made live oak trees in New Orleans unsightly and were very abundant.

### BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Ohio. E. W. Mendenhall (April 21): Although many cocoons are parasitized, they are numerous all over the southern part of the State on evergreens and many kinds of shade trees..

Missouri. L. Haseman (April 24): A few complaints were received from southwestern Missouri regarding bagworms on evergreens.

### ORIENTAL MOTH (Cnidocampa flavescens Wlk.)

Massachusetts. P. B. Dowden (April 25): Still numerous in a number of towns north of Boston, particularly Cambridge, Medford, Revere, Chelsea, Salem, and Beverly, although at some of the points where annual collections are made, there has been a decline in population since 1941. South of Boston the infestations remain at a very low level.



ASH

BROWN-HEADED ASH SAWFLY (Tomostethus multicinctus Roh.)

North Carolina. B. B. Fulton and J. T. Hansen (April 30): On April 14 large numbers of adults were emerging under ash trees on the campus of North Carolina State College at Raleigh and ovipositing in the edges of the leaves. Some of the larvae are full grown or nearly so.

BEECH

BEECH SCALE (Cryptococcus fagi Baer.)

New York. J. V. Schaffner, Jr. (April 21): Heavy infestation observed on a few trees near Roslyn, Long Island.

ELM

A SAWFLY (Macroxyela ferruginea Say)

Missouri. L. Haseman (April 24): During the early part of April adults began emerging in Kansas City, feeding on opening elm buds; and on April 22 some larvae, 1/2 inch long, were feeding on expanding elm leaves.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Utah. G. F. Knowlton (April 4): Trees severely damaged at Logan.

LINDEN

A BARK BORER (Chrysoclista linneella Clerck)

New York. J. V. Schaffner, Jr. (April 22): Abundant on some of the large estates in Nassau County, Long Island. The larvae bore into the corky and green bark on trunk and basal portions of branches of European linden. The winter is passed in the larval stage and the moths emerge late in May and in June.

MAPLE

WOOLLY MAPLE SCALE (Phenacoccus acericola King)

Rhode Island. B. Eddy (April 7): Was found heavily infesting a Norway maple 20 feet high in Providence.

OAK

A TWIG PRUNER (Hypermallus parallelus Newm.)

Virginia. L. A. Hetrick (April 22): In Northumberland County adults emerged April 18 from red oak twigs which, as larvae, they caused to be shed from a large red oak tree last September.

A GALL MIDGE (Parallelodiplosis florida Felt)

Kentucky. W. A. Price (April 25): The vein pocket gall midge began emerging in Lexington on April 23. Eggs on the under sides of leaves appeared in great numbers the same day.

OAK LECANIUM (Lecanium quercifex Fitch)

South Carolina. J. A. Berly (April 23): Was sent in from Hartsville on water oak, for identification and control data.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

New England. E. P. Felt (April 23): Generally prevalent in southern New England and south to Wilmington, Del. Many larvae were winter-killed.

PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

Virginia. L. A. Hetrick (April 2): First adults noted in the field at West Point.

PINE LOOPER (Ellopiella pellucidaria G. & R.)

Virginia. L. A. Hetrick (April 17): In King and Queen County the first moth of the pine geometrid was noted in flight in pine woods today.

PINE SAWFLY (Neodiprion americanum Leach)

Virginia. L. A. Hetrick (April 24): A few overwintered eggs of the pine sawfly were noted hatching. Hatching correlated with shedding of pollen from staminate cones of Pinus taeda.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

New York. R. E. Horsey (April 22): Numerous on white pine in an ornamental planting at Rochester.

A TERMITE (Reticulitermes sp.)

Virginia. L. A. Hetrick (April 17): In King William County subterranean termites almost completely consumed a living shortleaf pine tree (Pinus echinata) blown down by wind.

SYCAMORE

A COCCID (Stomacoccus platani Ferris)

California. R. H. Smith (April 20): Pest of sycamore trees throughout California. It threatens to be more destructive during the present season than it was last year. First generation of the year has malformed the leaves of a large percentage of the trees throughout the coastal area. The females are now emerging in great numbers and beginning to lay eggs under the plates of bark.

WILLOW

COTTONWOOD LEAF BEETLE (Chrysomela scripta F.)

Georgia. T. L. Bissell (April 19): Adults and recently hatched young were on weeping willow at Experiment.



INSECTS AFFECTING GREENHOUSE  
AND ORNAMENTAL PLANTS

THRIPS (Thysanura)

Florida. J. R. Watson (April 25): Florida flower thrips are becoming abundant in Alachua County, especially on lupines.

COMSTOCK MEALYBUG (Pseudococcus comstocki Kuw.)

Michigan. R. Hutson (April 24): There was a heavy infestation on flowering cherry in Detroit.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

New York. R. E. Horsey (April 22): A few were found on lilacs in two plantings at Rochester.

Maryland. E. N. Cory (April 17): Noted at Towson.

Minnesota. A. G. Ruggles, et al. (April 12): Requests for the control of this scale are coming in from the southern part of the State.

South Dakota. H. C. Severin and G. I. Gilbertson (April 25): Wintered very successfully and seems well adapted to the State. Did considerable damage.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Georgia. T. Thompson (April 11): Caused slight damage to ornamental shrubs observed in Quitman, Brooks County.

Mississippi. C. Lyle, et al. (April 24): Light infestations were observed where ladybeetles were placed last fall in the Gulfport district. Two infestations were observed on Pike County properties where no ladybeetles were found.

CALIFORNIA RED SCALE (Aonidiella aurantii Mask.)

Arizona. C. D. Lebert (April 25): A small infestation was found on ornamentals and citrus at Tucson. It was confined mostly to Mexican jasmine.

AMARYLLIS

A PHALAEINID (Xanthopastis timais Cram.)

Florida. J. R. Watson (April 25): Is common on amaryllis and to a lesser extent on narcissus and Hemerocallis.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

New York. R. E. Horsey (April 22): Overwintering scale badly infesting a small magnolia tree at Rochester in March.

ROSE

APHIDS (Aphidae)

South Carolina. F. F. Bondy (April 18): Complaints of injury to roses in Florence received during the week.

Georgia. R. W. Harned (April 6): Rose aphids are earlier at Tifton and more abundant than last season.

Alabama. J. M. Robinson (April 21): Abundant at Auburn.

Kansas. H. R. Bryson (April 25): Abundant on roses.

Mississippi. C. Lyle, et al. (April 24): Immature specimens of Macrosiphum sp. (probably rosae (L.)) were collected in Oktibbeha County, where they are present in destructive numbers on rose. Reports of injury to roses by plant lice have also been received from Grenada, Jackson, and Meridian districts and from northeastern and southeastern counties.

#### ROSE SAWFLY (Caliroa aethiops F.)

Kansas. H. R. Bryson (April 25): Adults observed in considerable numbers but no injury from the rose slugs are in evidence.

#### SPIREA

##### SPIREA APHID (Aphis spiraeicola Patch)

Mississippi. E. W. Dunnam (April 20): Tender shoots on spirea are being severely attacked in Leland.

C. Lyle (April 24): Specimens on spirea received from Hinds County early in April.

#### EUONYMUS

##### EUONYMUS SCALE (Chionaspis euonymi Comst.)

New York. E. P. Felt (April 23): Locally abundant on bittersweet at Bronxville.

Maryland. E. N. Cory (March 24): Noted at Rockville.

Alabama. J. M. Robinson (April 21): Reported on sugarberry at Montgomery on April 14.

Mississippi. C. Lyle (April 24): Is killing euonymus plants in the southern part of Madison County.

#### GLADIOLUS

##### A LEAFHOPPER (Oncometopia undata F.)

Alabama. J. M. Robinson (April 21): Reported on gladiolus at Dothan on April 1.

Florida. J. R. Watson (April 25): Taken in Lee County on Zepheranthes tretae.

It is not determined whether the thrips will breed on this rain lily.

#### HOLLY

##### WALNUT SCALE (Aspidiotus juglans-regiae Comst.)

Pennsylvania. G. Sleesman (April 7): Was found on American holly growing on an estate in Germantown. Several of the larger branches were killed by the infestation. (Det. by H. Morrison.)

#### JUNIPER

##### JUNIPER SCALE (Diaspis carueli Targ.)

Maryland. E. N. Cory (March 23): Noted at Smithsburg.



Michigan. E. I. McDaniel (April 23): Killing many juniper trees on ornamental stands in Midland and East Lansing.

### LILAC

LILAC BORER (Podosesia syringae Harr.)

Kansas. H. R. Bryson (April 21): Injuring lilacs at Junction City, as it has been doing for the past several years.

### ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

Maryland. G. S. Langford (March 3): Attacking arborvitae at Laurel.

AN APHID (Cinara thujaefolia Del. G.)

Mississippi. C. Lyle (April 24): Attacking arborvitae plants in the Meridian district, Monroe County.

### AZALEA

AZALEA WHITEFLY (Aleyrodes azaleae B. & M.)

South Carolina. F. F. Smith (May 17): Adults moderately abundant on azalea at Charleston.

Georgia. T. L. Bissell (April 1): Some bushes killed at Griffin.

Alabama. J. M. Robinson (April 4): Reported at Elberta.

Mississippi. C. Lyle, et al. (April 24): Collected in Harrison County early in April. Two infested plants observed in Hinds County.

A RED SPIDER (Tetranychus sp.)

South Carolina. F. F. Smith (May 17): Extensive damage noted at Summerville.

Mississippi. C. Lyle (April 24): On azalea received from Hancock County and on arborvitae from Stone and Winston Counties.

### BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Lab.)

New England. Is locally abundant at Hatchville, Mass., and also here and there in southwestern New England and adjacent areas in New York and New Jersey.

Maryland. E. N. Cory (April 9): Observed at Chestertown.

### CRAPEMYRTLE

CRAPEMYRTLE APHID (Myzocallis kahawaluokalani Kirk.)

Mississippi. C. Lyle, et al. (April 24): Reports of injury received from Monroe County.

INSECTS ATTACKING MAN AND  
DOMESTIC ANIMALS

MAN

BODY LOUSE (Pediculus humanus corporis Deg.)

- Florida. R. C. Bushland and W. E. Dove (March 16): One out of 14 negro prisoners in a large cell of the jail at Orlando was infested with about 60 lice.
- Michigan. E. I. McDaniel (April 15): Number received for determination is largest in reporter's experience in Michigan.

SANDFLIES (Culicoides spp.)

- Virginia. L. A. Hetrick (April 24): Appeared today in annoying numbers at West Point.
- South Carolina. W. C. Nettles (April 8): C. variipennis (Coq.) submitted from Saluda, where it is affecting poultry and people. (Det. by H. K. Townes)
- Georgia. W. E. Dove, et al. (April 28): Outbreaks of C. canithorax Hoff. reported from Brunswick, along the edges of the juncus marshes.
- Florida. W. E. Dove, et al. (April 28): On the eastern coast no sandflies have been observed on the marshes at Titusville, but were present in small numbers at New Smyrna Beach a few times during the month.

MOSQUITOES (Culicinae)

- Maryland. E. N. Cory (April 7): Mosquitoes observed at Fort Washington.
- Virginia. L. A. Hetrick (April 24): Aedes sollicitans (Wlk.) is relatively abundant and troublesome at West Point.
- Missouri. L. Haseman (April 1): Mosquitoes attracted considerable attention by flying outdoors on two or three warm evenings during the third week in March.

CHIGGER (Eutrombicula alfreddugesi Oud.)

- Missouri. L. Haseman (April 1): Overwintered adults observed during the third week of March, crawling about in great numbers.

AMERICAN DOG TICK (Dermacentor variabilis Say)

- Rhode Island. B. Eddy (April 24): Observed on April 6 to be prevalent in district of Gaspee Plateau.
- Maryland. Juliet H. Carrington (May 1): Specimens taken from a dog in Chevy Chase, not far from Rock Creek Park. Owner stated that dog had been infested for 2 weeks.
- Missouri. L. Haseman (April 24): Adult found feeding today at Columbia.
- Oklahoma. C. F. Stiles (April 27): Possibly the American dog tick, or wood tick, reported in large numbers and as causing much annoyance to livestock in Adair, Delaware, Wagoner, Pontotoc, McCurtain, and Haskell Counties.

SPOTTED FEVER TICK (Dermacentor andersoni Stiles)

- Idaho. J. R. Douglass (April 22): Adults very common in southern Idaho.



BROWN DOG TICK (Rhipicephalus sanguineus Latr.)

Missouri. L. Haseman (April 1): January cold was survived, and this tick was active in outdoor dog houses in south-central Missouri during February.

BLACK WIDOW SPIDER (Latrodectus mactans F.)

Nebraska. H. D. Tate (April 15): Twelve females and 2 males collected in Adams County about March 22, indicating that males as well as females overwinter in Nebraska. One adult female was collected on April 5 in a house in Hall County.

CATTLE

STABLEFLY (Stomoxys calcitrans L.)

Florida. W. E. Dove (March 23): From 30 to 50 observed on each of about 20 range animals near Tallahassee, in an area where peanuts were grown last year. This is an early record.

TICKS (Amblyomma spp.)

Tennessee. G. M. Bentley (April 23): Gulf coast tick (A. maculatum Koch) found at Shelbyville, Bedford County.

Missouri. R. E. Roselle (April 24): Lone star ticks (A. americanum L.) have been attacking livestock since early in April in south-central and south-eastern Missouri; some of the adults reported as fully engorged on April 16.

BUFFALO GNATS (Simuliidae)

Mississippi. C. Lyle, et al. (April 24): Eusimulium pecuarum Riley observed in Carroll, Grenada, Tallahatchie, and Tate Counties; in some said to be worse than for several years. Specimens of Simulium venustum Say received from George and Stone Counties, where they were injuring poultry and livestock. (Det. by E. W. Stafford.)

CATTLE GRUBS (Hypoderma spp.)

Oklahoma. C. F. Stiles (April 27): Heel flies have been active over much of central Oklahoma during the last 2 weeks.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Florida. W. E. Dove, et al. (April 28): Comparatively few complaints of abundance of fleas, but inspections have revealed three or four sizable infestations of the sticktight flea near Orlando.

H O U S E H O L D   A N D   S T O R E D - P R O D U C T S   I N S E C T S

HOUSEFLY (Musca domestica L.)

Florida. W. E. Dove, et al. (April 28): Celery waste in the vicinity of Sanford is breeding tremendous numbers. Material is decomposed and has passed the active fermentation stage, which produced Stomoxys calcitrans L.

ANTS (Formicidae)

- Ohio. E. W. Mendenhall (April 21): The black pavement ant (Tetramorium caespitum L.) is a great nuisance in lawns and gardens at Columbus; some damage to vegetation.
- Indiana. J. J. Davis (April 23): Number of reports received of ants in houses, and ants have become very active in lawns during the last week.
- Maryland. E. N. Cory (April): Request for control information from Takoma Park on April 14. Black ants in a lawn reported from Baltimore on April 20. T. caespitum was reported from Salisbury on March 31.
- Mississippi. C. Lyle, et al. (April 24): Many complaints of annoyance by fire ants (Solenopsis xyloni McCook) received from Durant district; also reported as present on trees infested with cottony-cushion scale (Icerya purchasi Mask.) in Harrison County. Many complaints of Monomorium minimum (Buckl.) received from Durant.
- Kansas. H. R. Bryson (April 17): Reported as causing annoyance in houses in Manhattan and Hollenberg.

BOXELDER BUG (Leptocoris trivittatus Say)

- Delaware. L. A. Stearns (March 26): Reported as abundant in house in Milford.
- Maryland. E. N. Cory, et al. (April): Reports received in March and April from Baltimore, Eastport, and Westminster.
- Indiana. J. J. Davis (April 23): Especially annoying during the last month throughout the northern half of Indiana, from Indianapolis north; over 30 reports received.
- Michigan. R. Hutson (April 24): Specimens received from Benton Harbor, Detroit, Monroe, Ionia, Grand Rapids, Muskegon, and Saginaw.
- Wisconsin. C. L. Fluke (April): Numerous and causing complaints from all the southern counties.
- Missouri. L. Haseman (April 1): Considerable attention attracted since it has come out of hibernation.
- Nebraska. H. D. Tate (April 15): Requests for control information received from Nemaha, Otoe, Hall, Dodge, Antelope, Lancaster, and Thurston Counties during the period from March 21 to April 15.
- Kansas. H. R. Bryson (April 25): Although comparatively scarce during the last 4 or 5 years, these bugs are regaining normal abundance and are now quite numerous.
- South Dakota. H. C. Severin (April 13): Numerous inquiries from many points in eastern South Dakota. Active on warm days in houses, large numbers being collected.
- Utah. G. F. Knowlton (April 4): Complaints of annoyance in dwellings and other buildings in Salt Lake, Ogden, and Brigham Counties.

BROWN-BANDED ROACH (Supella supellectilium Serv.)

- Oklahoma. C. F. Stiles (April 27): Reported as numerous in houses in Sayre.

DRUG STORE WEEVIL (Stegobium paniceum L.)

- New York. R. E. Horsey (April 22): Abundant in a small quantity of stored corn and sunflower seed at Rochester in March.